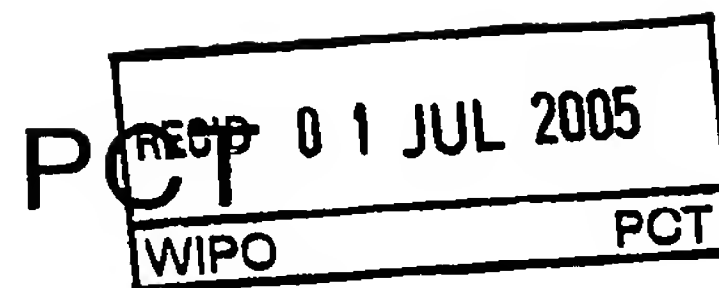


# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY



To:

see form PCT/ISA/220

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/IB2005/051018

International filing date (day/month/year)  
24.03.2005

Priority date (day/month/year)  
30.03.2004

International Patent Classification (IPC) or both national classification and IPC  
G02B3/14, G02B26/02

Applicant  
KONINKLIJKE PHILIPS ELECTRONICS N.V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized Officer

THEOPISTOU, P

Telephone No. +49 89 2399-2471



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IB2005/051018

**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IB2005/051018

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	
	No: Claims	1-12
Inventive step (IS)	Yes: Claims	
	No: Claims	1-12
Industrial applicability (IA)	Yes: Claims	1-12
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

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**Box No. VI Certain documents cited**

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**1. Certain published documents (Rules 43bis.1 and 70.10)**

**and / or**

**2. Non-written disclosures (Rules 43bis.1 and 70.9)**

**see form 210**

**Re Item V.**

- 1 Reference is made to the following documents:

D1: WO 03/069380 A (KONINKLIJKE PHILIPS ELECTRONICS N.V; FEENSTRA,  
BOKKE, J; KUIPER, STEIN) 21 August 2003 (2003-08-21)  
D2: US 2001/017985 A1 (TSUBOI TAKAYUKI ET AL) 30 August 2001 (2001-08-30)  
D3: US-A-5 731 907 (SIGLER ET AL) 24 March 1998 (1998-03-24)

2 ARTICLE 6 PCT

The expression "for correcting refractive index related aberrations in an optical system" is interpreted as "suitable for correcting refractive index related aberrations in an optical system" and is thus considered to be not limiting for the scope of claim 1 (Article 6 PCT & International Search & Preliminary Examination Guidelines Ch. 5.23)

3 INDEPENDENT CLAIM 1

- 3.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.  
Document D1 discloses (the references in parentheses applying to this document):

An optical element (cf. Fig. 1), characterized in that it comprises a fluid chamber (5), which is provided with an electrode configuration (2,12) and includes a first, electrically conducting, fluid (B) and a second, non-conducting, fluid (A), and an interface (14) between the fluid, and the corrective power of the element being controllable by electrowetting forces generated by a voltage (V) applied to the electrode configuration (2,12) and deforming the shape of the interlace (14,14').

Although D1 does not explicitly mention that the fluids have different Abbe numbers, the embodiments use the same materials for the fluids as in the current application (cf. pg. 4, ln. 3-10 of D1 and pg. 5, ln. 31-pg. 6, ln. 4 of the originally filed description)

or claim 7). Since the apparatus of D1 appears to have all the structural features of claim 1 it will also possess the same properties with respect to the Abbe numbers.

3.2 For reasons of completeness it is mentioned that D2 (cf. Fig. 1-2; par. [0044]-[0054]) has the same structural features and as such also anticipates the subject-matter of claim 1.

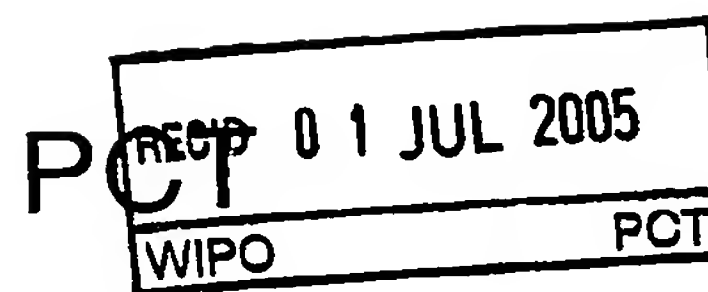
3.3 It is further known that in order to correct chromatic aberrations the materials of a liquid lens system need to be selected in view of their refractive indices and the Abbe numbers (cf. e.g. D3 Tables 1 and 2). Therefore, the skilled person would easily select the two fluids (cf. D1: pg. 4, ln. 11-14 or D2: par. [0048]-[0049]) accordingly in any of D1 or D2 in order to compensate chromatic aberrations. Hence, the subject-matter of claim 1 is not considered as involving an inventive step (Article 33(3) PCT).

#### 4 DEPENDENT CLAIMS 2-12

Dependent claims 2-12 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT) because they refer to features also known by the available prior art with respect to the fluids (claims 2,7), the structure (claims 3-6) and the incorporation in different devices (claims 8-12).

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See paragraph 2 below

International application No.  
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G02B3/14, G02B26/02

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### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized Officer

THEOPISTOU, P

Telephone No. +49 89 2399-2471



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IB2005/051018

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**Box No. I Basis of the opinion**

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☐ table(s) related to the sequence listing
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  - c. time of filing/furnishing:  
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3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/B2005/051018

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	
	No: Claims	1-12
Inventive step (IS)	Yes: Claims	
	No: Claims	1-12
Industrial applicability (IA)	Yes: Claims	1-12
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

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**Box No. VI Certain documents cited**

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**1. Certain published documents (Rules 43bis.1 and 70.10)**

**and / or**

**2. Non-written disclosures (Rules 43bis.1 and 70.9)**

**see form 210**



**Re Item V.**

1 Reference is made to the following documents:

- D1: WO 03/069380 A (KONINKLIJKE PHILIPS ELECTRONICS N.V; FEENSTRA, BOKKE, J; KUIPER, STEIN) 21 August 2003 (2003-08-21)
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2 ARTICLE 6 PCT

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Although D1 does not explicitly mention that the fluids have different Abbe numbers, the embodiments use the same materials for the fluids as in the current application (cf. pg. 4, ln. 3-10 of D1 and pg. 5, ln. 31-pg. 6, ln. 4 of the originally filed description

or claim 7). Since the apparatus of D1 appears to have all the structural features of claim 1 it will also possess the same properties with respect to the Abbe numbers.

3.2 For reasons of completeness it is mentioned that D2 (cf. Fig. 1-2; par. [0044]-[0054]) has the same structural features and as such also anticipates the subject-matter of claim 1.

3.3 It is further known that in order to correct chromatic aberrations the materials of a liquid lens system need to be selected in view of their refractive indices and the Abbe numbers (cf. e.g. D3 Tables 1 and 2). Therefore, the skilled person would easily select the two fluids (cf. D1: pg. 4, ln. 11-14 or D2: par. [0048]-[0049]) accordingly in any of D1 or D2 in order to compensate chromatic aberrations.  
Hence, the subject-matter of claim 1 is not considered as involving an inventive step (Article 33(3) PCT).

#### 4 DEPENDENT CLAIMS 2-12

Dependent claims 2-12 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT) because they refer to features also known by the available prior art with respect to the fluids (claims 2,7), the structure (claims 3-6) and the incorporation in different devices (claims 8-12).